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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/572,756

03/20/2006

Raul Hess

HESS2

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20151 7590 06/30/2009

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EXAMINER

PAIK, SANG YEOP

ART UNIT

PAPER NUMBER

3742

MAIL DATE

DELIVERY MODE

06/30/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,756	Applicant(s) HESS, RAUL	
	Examiner SANG Y. PAIK	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-48 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 25-48 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/24/08, 9/8/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 25-44 and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartel et al (US 6,337,749) in view of Kawase et al (US 5,767,858), and Williams (US 6,300,595) or Shyu et al (US 4,918,611).

Hartel shows the process claimed for producing a surface texture of a body using a removing agent such as a laser wherein the surface of the body is described by means of a polygon network showing the topological depths. But, Hartel does not explicitly show describing the polygon networks with a raster image which contains pixels that are associated with gray levels and removing of the material layers pursuant to the gray level.

Kawase shows an arbitrary curved body that is described by a raster image having a surface image divided into polygons with corresponding pixels with numerical codes or values.

Williams shows a three dimensional surface body that is designated with grayscale shades that correspond to the desired layer depths or layer distance that is removed by the laser, and Williams further shows that the removing is achieved as the

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laser scans the surface body layer by layer and lien by line to each of the subsequent layers in a focal area as shown in Figure 4.

Shyu also shows that it is known in the art that a surface body is scanned and described with grayscale levels by which the surface body material is to be removed by a laser, and Shyu further shows the computer by which the scanned surface body is then process removed by the laser.

In view of Kawase, it would have been obvious to one of ordinary skill in the art to adapt Hartel with the polygon networks with a raster image with associated pixels as such are well known in the art to describe an image in a digitized format and assign the grayscale levels, as taught by Williams and Shyu, to each of the pixels to allow a designated surface layer removal distance or depths to form the desired surface texture layer by layer in a sequent manner as further taught by Williams.

It is also shown that each of the layers are constructed from partial surfaces in the polygon forms that are adjoined to one another through common border areas, are offset or rotated to one another, and are arranged at random having different sizes as illustrated by Hartel in Figure 1.

Williams and Shyu both show the steps of inputting the surface image to a computer is well known, and Shyu further shows the image processing means (28) for projecting and converting the scanned image for further controlling the laser. And, it would have been obvious to input the polygon networks as shown in Hartel in such computer and its programs to more effectively and conveniently store, manage and

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project the input information of the polygon networks on to the surface body which is now ablated and penetrated by the laser system for the desired surface texture.

3. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartel in view of Kawase, Williams, and Shyu as applied to claims 25-44 and 46-48 above, and further in view of Patterson et al (US 6,313,434).

Hartel in view of Kawase, Williams, and Shyu, shows the process claimed except for the removal agent striking the partial surface obliquely.

Pattersons shows a laser that strikes an object obliquely to more effectively create a desired inclination and depth of the ablated material.

It would have been obvious to one of ordinary skill in the art to adapt Hartel, as modified by Kawase, Williams, and Shyu, with the removal agent such as laser to strike the partial surface obliquely to more effectively ablate and penetrate the surface producing the desired surface texture.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANG Y. PAIK whose telephone number is (571) 272-4783. The examiner can normally be reached on M-F (9:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SANG Y PAIK/

Primary Examiner, Art Unit 3742